

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

UNITED STATES OF AMERICA,)
)
Plaintiff,)
)
vs.) NO: 23-CR-915 MIS
)
JESUS CORONADO,)
)
Defendant.)

PARTIAL TRANSCRIPT OF PROCEEDINGS
JURY TRIAL
VOLUME II OF II
(*Trial testimony of Tiffany Smith and Candi Alvarado*)
BEFORE THE HONORABLE MARGARET I. STRICKLAND
UNITED STATES DISTRICT JUDGE
TUESDAY, FEBRUARY 13, 2024
LAS CRUCES, DOÑA ANA COUNTY, NEW MEXICO

(Proceedings recorded by machine shorthand and
transcript produced by Computer-Aided Transcription.)

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(Begin partial transcript.)

MR. MCNAIR: Thank you, Your Honor. The Government calls Tiffany Smith.

MR. MCNAIR: While we're waiting for her to come in, do we know if it's possible for the --

THE COURT: You can ask Mr. Jones. He's back there in the room, fixing it.

(Discussion off the record.)

THE COURT: Come forward to be sworn.

TIFFANY SMITH,

After having been first duly sworn, did make the following answers:

DIRECT EXAMINATION

Q. (BY MR. MCNAIR): Good morning. Could you please state your name.

A. Yes. My name is Tiffany Smith.

Q. And where do you work?

A. I work at the FBI laboratory in the DNA Casework Unit in Quantico, Virginia.

Q. And how long have you been with the FBI?

A. Since August of 2010.

Q. And what is your current title?

A. I'm a forensic examiner and also the case flow program manager.

1 Q. And so what are your responsibilities?

2 A. As a forensic examiner, when we receive evidence into
3 the DNA Casework Unit, I will review the incoming
4 communication that outlines what is being submitted. And I
5 will then direct a team of biologists to perform testing on
6 that evidence. It depends on the type of case, but I might
7 do blood or semen testing, or I will go straight to DNA
8 testing.

9 Once my team of biologists process the evidence,
10 I will review all the data. I will interpret the DNA
11 profiles obtained from the evidence. I will compare those
12 profiles to known individuals, if any known profiles exist.
13 I will write a report and then testify, if needed.

14 Q. And what is your educational background?

15 A. I have a bachelor's of science degree from West
16 Virginia University in forensic investigative sciences, and
17 I have a master of science degree in biology, also from West
18 Virginia University.

19 Q. And did you also teach during your post-graduate
20 career?

21 A. I did. So when I was in my master's program, I was a
22 teaching assistant, so I did research as well as taught a
23 variety of courses, including forensic DNA, cell DNA, things
24 of that nature.

25 Q. And so when you mentioned your work history, you're at

1 the FBI. Did you receive additional training, while working
2 at the FBI, in DNA testing and analysis?

3 A. Yes. So once I was hired by the FBI laboratory, I was
4 actually hired directly out of my master's program, so it
5 was my first job after college. Once I was hired, I went
6 through a year-and-a-half training program before I could
7 work independently on case work. In that year-and-a-half
8 training program, I did the same duties I currently do, but
9 it was under the direct observation or supervision from
10 qualified analysts.

11 I also worked in the laboratory on mock items of
12 evidence so that I could understand our standard operating
13 procedures, or SOPs, which are the procedures our biologists
14 follow when performing testing on items of evidence. I also
15 went through a series of oral board exercises and moot court
16 examinations. I took a test at the end of that training to
17 show that I was deemed qualified. And then, at that point,
18 I was allowed to work independently. After becoming
19 qualified, I still go through yearly continuing education to
20 maintain those qualifications.

21 Q. And I guess, over the course of your career -- and
22 maybe you just mentioned that -- you have continuing
23 education in this field?

24 A. I do. So, every year, I'm required to take continuing
25 education hours. Usually, that's in the form of reading

1 articles, attending conferences or presentations. It could
2 be going to classes. It really depends, but most of the
3 time, it's attending conferences.

4 Q. Have you been a presenter at conferences?

5 A. I've taught to our evidence response team. That was
6 more like a few years ago. I don't do it as much anymore;
7 however, I also taught DNA procedures to forensic nurses,
8 mostly on proper collection and preservation of evidence.

9 Q. And do you have any publications in this area?

10 A. I do not, no.

11 Q. And have you received recognition by the FBI for your
12 work?

13 A. I have. I've received some awards for my continuing
14 work, as well as time-off awards, things of that nature.

15 Q. Finally, have you been qualified as an expert related
16 to DNA testing in federal court before?

17 A. I have, yes.

18 MR. MCNAIR: At this time, Your Honor, the
19 Government would ask that Ms. Smith be recognized as an
20 expert in the field of DNA testing and analysis.

21 THE COURT: What's -- Mr. Coronado, what's your
22 position?

23 THE DEFENDANT: No objection, Your Honor.

24 THE COURT: All right. She's recognized as an
25 expert in the field of DNA testing and analysis.

1 Q. (BY MR. MCNAIR): So just to start, could you
2 explain for the jury what DNA is?

3 A. Sure. "DNA" stands for deoxyribonucleic acid. And it
4 is our hereditary materials. It controls all chemical
5 processes going on in our bodies but also controls what we
6 look like. We receive half of our DNA from our mother and
7 half from our father.

8 Q. And where is DNA found in our bodies?

9 A. DNA is found within our cells. If you picture a cell
10 similar to like an egg, the type of DNA I test would be
11 found in the yoke of that egg. And the cells are the
12 building blocks of our body. We have trillions and
13 trillions of cells. And that means that we're going to have
14 DNA in our skin from our skin cells, in our blood from
15 certain blood cells. Males have sperm cells that contain
16 DNA. And then also all the different muscles and tissues
17 will also have DNA within them.

18 Q. Does our DNA stay the same regardless of where it's
19 located in our body?

20 A. It does, yes. DNA is the same throughout your body.

21 Q. And does it ever change over time?

22 A. No, it does not.

23 Q. And so what are some of the common sources of DNA for
24 testing and analysis?

25 A. For forensic DNA testing, typically, we're going to

1 focus on body fluids, such as blood, semen, or saliva. Body
2 fluids contain a lot of DNA, because there's a lot of cells
3 within those fluids. We also look for what we call "touch
4 DNA." And that's from, typically, skin cells or DNA that's
5 deposited on our hands. When we touch items, we might leave
6 some of that DNA behind.

7 Q. And does DNA vary from person to person?

8 A. It does. DNA is unique with the exception of
9 identical twins. Identical twins do share the exact same
10 DNA profile. Over 99 percent of our DNA is the same, and
11 that's what makes us humans. It gives us two arms, a nose,
12 a mouth, but there's less than 1 percent of the DNA that
13 varies among individuals. And we focus on a very small
14 portion of that 1 percent for forensic DNA testing, so that
15 we can see the differences among individuals.

16 Q. And I guess if you could just briefly describe, like,
17 how you actually go about finding those differences. What
18 are you looking at?

19 A. Sure. So in the type of testing that we do at the FBI
20 laboratory, we look at what is called "short tandem
21 repeats," or "STRs." These are short regions of the DNA
22 that vary in their length. So very similar to how trains
23 would work where all trains have an engine and a caboose,
24 some trains are really long because they have a lot of
25 boxcars; other trains are really small because they only

1 have a few boxcars. It's the same with these STR regions.
2 Everyone has them; however, some individuals have more
3 repeats than others, making their DNA longer than somebody
4 else. So, for instance, one person might get 7 repeats from
5 their mom, 12 from their dad, making their DNA profile a
6 7-12, where someone else might be a 15-20.

7 Q. And so, when you're comparing DNA, could you explain
8 to the jury what a "known sample" is versus an "unknown
9 sample"?

10 A. Sure. Sure. A "known sample" is a sample taken
11 directly from an individual so that we know the source of
12 that DNA belongs to that person. Typically, this will be a
13 cheek swab or a blood sample. We know that the DNA profile
14 generated is that individual's DNA profile.

15 An "unknown" or "evidentiary sample" is when we
16 don't know the source of the DNA. So, for instance, if I
17 was to swab this microphone, I don't know whose DNA was
18 previously left on this item. That's an unknown source;
19 however, I can compare that DNA to known individuals to see
20 if they are included or excluded as possible contributors.

21 Q. And so you mentioned a "cheek swab." Is that also
22 known as a "buccal swab"?

23 A. Yes, it is.

24 Q. And is that a common way of obtaining a known sample?

25 A. Yes, that is the most common way because it's not very

1 invasive; whereas, taking blood from an individual is more
2 invasive. So the common source we receive is a cheek swab.

3 Q. What does the term "contributor" mean in relation to
4 DNA testing?

5 A. "Contributor" is just a term we use to describe if an
6 individual's DNA might be present. So we would say that
7 that person may be a contributor to the DNA; their DNA might
8 have been left behind on that item. It could also mean, if
9 DNA is from more than one individual, we could say that
10 multiple contributors are present on an item.

11 Q. And so when you're examining DNA from a particular
12 item of evidence, is it common that you find that there are
13 multiple contributors?

14 A. It is very common. Especially, if it's a common-use
15 item. Again, this microphone has probably been touched or
16 handled by multiple people, so if I were to swab this
17 microphone, I would expect to find a mixture of DNA, which,
18 again, means that DNA from more than one individual or more
19 than one contractor might be present.

20 Q. And, I guess, when you're doing your DNA testing and
21 analysis, how do you tell those apart? How do you
22 differentiate between those?

23 A. So to determine the number of contributors, I will
24 look at the profile in its entirety. Again, because we
25 receive one DNA type from our mom and one DNA type from our

1 dad, we expect a maximum of two numbers or two peaks for a
2 single individual. So, for instance, you could get the same
3 DNA type from both parents, so you could get a 7 and a 7,
4 meaning you'd only have one DNA type. Or, again, you could
5 get one from mom, a 7, one from dad, a 12, making your DNA
6 type a 7-12. You would expect two types. If I see more
7 than two peaks, that means the DNA, most likely, was left
8 behind by more than one individual. So I look at the
9 profile in its entirety to determine the number of
10 contributors.

11 Once I determine the number of contributors, I
12 have software tools that will help break apart those
13 contributors to allow for comparisons and statistical
14 analysis.

15 Q. And, I guess, as part of that statistical analysis,
16 are you actually able to quantify how prevalent a
17 contributor's DNA is in relation to the other contributors?

18 A. I do that by individually looking at the DNA profile
19 as well. So when I look at a DNA profile, I can see whether
20 all of the contributors left behind similar amounts of DNA
21 or I can tell if one person left behind the majority of the
22 DNA.

23 Once I do that, I can also use the software
24 packages that will estimate the percentage of each
25 contributor. So I can look at the sample and be able to

1 kind of get an estimate of what I think I should see by
2 using this additional statistical tool.

3 Q. And are you able to distinguish between male and
4 female contributors?

5 A. I can. So when we do our DNA analysis, we look at 21
6 of those STR locations and then we also look at three
7 sex-determining locations. Those sex-determining locations
8 will tell me if a male DNA is present, if a female is
9 present, or potentially a mixture of both.

10 Q. And you mentioned identical twins earlier sharing the
11 same DNA profile. What about just siblings, in general?

12 (Reporter interruption for clarification.)

13 A. In general, siblings share approximately 50 percent of
14 their DNA. They can share more or less, but, on average,
15 it's around 50 percent.

16 Q. And so if you were looking at, say, male and female
17 siblings, comparing their DNA, how would that affect your
18 comparison or your analysis?

19 A. So the STR locations that we look at, we would expect,
20 between full siblings, meaning they have the same mom and
21 same father -- we would expect approximately 50 percent of
22 their DNA would be similar; however, that sex-determining
23 location would be different. So a male would, again, show
24 up as a male in a sample; whereas, a female would show up as
25 a female. So I would be able to distinguish between male

1 and female siblings.

2 Q. Are you familiar with the term "degradation" in
3 relation to DNA?

4 A. Yes. "Degradation" is when DNA breaks down. And this
5 can occur due to a variety of factors. Time, for instance.
6 So if the sample is very old, it will begin to break down
7 over time. If an item of evidence is left out in different
8 environmental conditions, it will also begin to break down.
9 So, for instance, UV light or sunlight can begin to break
10 down the DNA. Bacteria, mold will begin to break down the
11 DNA. Water, humidity, those all also have effects on the
12 DNA profile.

13 One thing to note, though, is, when the DNA
14 degrades, it does not change, it just is no longer able to
15 be detected. So, for instance, if you were to put ground
16 hamburger out on your deck in a hot summer day, it will
17 begin to rot, but it won't turn into chicken.

18 Q. So I guess, ultimately, the DNA is still there, in a
19 sense, but you're not able to obtain a usable sample; is
20 that correct?

21 A. Yes, that's correct. The DNA begins to break down
22 into too small of components for us to be able to connect it
23 any longer.

24 Q. Could you provide a general overview of how DNA
25 testing is conducted at the FBI laboratory?

1 A. Sure. At the FBI laboratory, what I will do first is
2 I will set up what we call an "exam plan" first. And that
3 is a listing of what I want tested in a particular case. My
4 team of biologists will begin the testing.

5 The first process is a "collection." And that is
6 when a biologist will swab or cut an item of evidence to try
7 to obtain those cells that contain DNA. They will put that
8 swab or cutting in a tube that's uniquely labeled and
9 bar-coded to distinguish it from all other samples.

10 Then the biologist will add chemicals and heat.
11 This will break open those cells containing the DNA to
12 release the DNA from that yoke, for instance, when you're
13 picturing the egg. Once that DNA is removed, it goes
14 through a series of washing steps to remove everything else.
15 It removes the proteins. It removes the lipids. It removes
16 all the other cellular components just leaving clean
17 purified DNA.

18 We then quantify how much DNA is present. This
19 is extremely important because we want to make sure we put
20 enough DNA in the next step to detect it, but we don't want
21 to put too much DNA in, because we might overflow the
22 sample.

23 The fourth step is the amplification process.
24 And this is where we make millions of copies of those STR
25 regions, so we're just focusing on those portions of DNA

1 that vary among individuals, ignoring everything else that
2 is the same. So similar to a photocopier at work, you can
3 make copies of a single page in the book instead of the
4 entire book.

5 Lastly, we'll run it through a separation process
6 where the small fragments of DNA with the -- the DNA
7 fragments that have the fewer number of repeats will travel
8 quickly through the machine. The longer pieces of DNA move
9 more slowly through the machine. And this will generate,
10 eventually, a DNA profile that I can then analyze and
11 interpret and then, eventually, compare to known
12 individuals.

13 Q. Okay. So on that last point, so once you have the DNA
14 profiles, that's when you do your comparison?

15 A. Yes. The first thing I will do is actually interpret
16 the evidence before even looking at a known sample. So I
17 will look at the evidence profile to determine if it was
18 male, female, or a mixture of both. I will then determine
19 if the DNA was left behind by one contributor or more than
20 one contributor. This would indicate a mixture. And once
21 that is done, I will then, at that point, compare a known
22 individual to that evidence to see if their DNA matches the
23 evidence, which means the DNA is the same between the known
24 individual and the evidence item; or I will determine if the
25 DNA is different. That is an exclusion; meaning, the DNA

1 between a known individual is not the same as an evidence of
2 item -- or excuse me, an item of evidence.

3 Q. And so, I guess, how do you express your ultimate
4 conclusions in regard to whether or not there's a match?

5 A. So if a match is present, I have to provide a
6 statistic to show the strength of that match. I can't just
7 simply state that an individual matches, because multiple
8 people might match that sample, depending on the quality of
9 the profile.

10 So in order to do this, I calculate a statistic
11 called a "likelihood ratio." A "likelihood ratio" is really
12 just a mathematical formula that compares the probability of
13 observing that DNA, giving two alternative explanations.
14 The first is: What is the probability of observing that DNA
15 profile, given that it originated from a particular person
16 of interest? And I compare that to the probability of
17 observing the DNA profile, given that it was generated by a
18 random unrelated individual and not that person of interest.

19 This statistic will provide a number. That
20 number can be one, and that means it's equally likely that a
21 contributor -- or that a certain person is a contributor or
22 not a contributor. So it's very uninformative. It doesn't
23 provide any helpful information. The number can be less
24 than one. That actually supports exclusion; meaning that
25 person -- it's more likely that it was left by someone other

1 than your contributor. And then, lastly, you can get a
2 number greater than one. If you get a number greater than
3 one, that means there is more support that that individual
4 is a contributor. That number can range from two to,
5 really, infinity. So the bigger the number, the more
6 support.

7 So, for instance, if I was to say something is
8 two times more likely to occur, there's strength for that,
9 but two times more likely is not -- it's very limited in
10 strength. However, if I say something is a million times
11 more likely to occur, that is going to provide very strong
12 support for that chance, you know, that explanation. So,
13 again, the number is really what's important. The bigger
14 the number, the more strength of a particular explanation of
15 the DNA.

16 Q. And so, once you've done all that, how do you know, in
17 the process when you're doing your analysis, whether or not
18 the testing that you performed was reliable?

19 A. So, at the FBI laboratory, we follow very strict
20 standard operating procedures. So if we follow those
21 procedures, we know we're going to get similar results every
22 time we do the test. In addition, our biologists and
23 examiners are extensively trained. We also go through very
24 strict cleaning procedures in the laboratory. So the
25 biologists will only take one item of evidence out at a

1 time. They will then close that item up, put that item
2 away, and then clean the entire work surfaces with bleach to
3 remove any residual DNA that might be present.

4 The laboratory, as a whole, is accredited;
5 meaning, that an outside organization comes into the lab to
6 review our procedures, our staff, our training, and deems
7 that we are meeting all the standards that are required.
8 And, lastly, the FBI laboratory also, especially the DNA
9 Casework Unit, is audited every other year by an external
10 body to ensure we're following quality assurance standards
11 for DNA testing laboratories.

12 Q. And, I guess, a little bit on that point, what is
13 "cross-contamination"?

14 A. "Cross-contamination" is when DNA from one item of
15 evidence gets contaminated or transferred to another item of
16 evidence, even though they've never been in direct contact
17 with one another.

18 Q. And so how do you protect against that in your
19 procedures and protocols?

20 A. So, again, a biologist will only take one item of
21 evidence out at a time. They will then put that item away,
22 use bleach to clean all of their work surfaces. Bleach is
23 known to break down or remove DNA from an item of evidence.
24 After -- or excuse me, from a surface. The biologists also
25 wear personal protective equipment, including gloves, masks,

1 eye protection, lab coats to prevent their DNA from ending
2 up on an item of evidence. And then, also, we have controls
3 that are run with every step in the process. And a control
4 is going to show us if contamination potentially occurred or
5 if the procedure worked properly.

6 So, for instance, during the extraction process
7 where we're breaking open those cells, we have a control
8 that is run alongside the evidence that has no DNA in it, so
9 that if any DNA is detected in that sample, we know that
10 contamination occurred and we would not report those results
11 or we would have to at least seek guidance from our
12 technical leader, but we would report the contamination.

13 Q. So I want to return to the facts in this case. In May
14 of 2022, did the FBI laboratory receive a firearm that was
15 recovered from 1425 Durazno?

16 A. Yes, we did.

17 Q. And did you also receive a buccal swab from
18 Mr. Coronado?

19 A. Yes, we did.

20 Q. And I guess -- so that went through the five-step
21 process, the collections, the amplification -- I can't
22 remember all the things you said, but it went through
23 that -- the testing of that went through that five-step
24 process?

25 A. Yes, the buccal sample and the firearm went through

1 that five-step process. For the buccal sample, a cutting
2 would have been taken. And for the firearm, all of the
3 textured surfaces would have been swabbed to try to collect
4 any potential cells that might be trapped within that
5 textured area.

6 Q. And so did you ultimately conclude whether or not
7 Mr. Coronado's DNA was a match to the known sample from the
8 buccal swab?

9 A. Yes. So once the entire DNA process was complete, I
10 interpreted the DNA profile from the firearm first. So on
11 that firearm, male DNA was observed to be present on the
12 firearm. Also a mixture of DNA was observed. That mixture
13 was interpreted, assuming that the DNA originated from three
14 contributors. Once I determined it was a male profile with
15 three individuals, I compared that to Mr. Coronado. And I
16 determined that he could not be excluded; meaning, he was a
17 match to the DNA present on that firearm.

18 So because I had a match, I had to calculate a
19 statistic to, again, show the strength of that match. And
20 in this particular case, that likelihood ratio I generated
21 was 3.8 septillion. What that means is the DNA results from
22 the firearm are a septillion times more likely to occur if
23 Mr. Coronado and two unrelated, unknown individuals are
24 contributors than if three unknown, unrelated individuals
25 are contributors. This provides very strong support for

1 inclusion of Mr. Coronado being a contributor to that
2 firearm.

3 Q. Would that be -- I guess, on the hierarchy of that,
4 would that be at the highest level of strong support -- of
5 support for inclusion?

6 A. At the FBI laboratory, we have kind of a verbal scale
7 to apply the strength of the support. And the highest level
8 is anything over a million is considered very strong
9 support. And because 3.8 septillion is over that number, it
10 does fall in our highest category, yes.

11 Q. And at any point in the testing process, were there
12 alerts? You were talking about the control samples and
13 things like that. Were there any alerts for
14 cross-contamination?

15 A. No, there were not.

16 Q. And, let's see, so you mentioned that there were three
17 contributors to the firearm; is that correct?

18 A. Yes, I interpreted the mixture of DNA from that
19 firearm as originating from three individuals.

20 Q. And a little bit before, you were saying that you were
21 actually able to quantify the prevalence of the DNA profiles
22 in relation to the contributors; is that correct?

23 A. Yes, I am. I was able to look at the DNA obtained
24 from the firearm. And what I observed is one individual was
25 donating the majority of the DNA, and the other two

1 individuals were donating low levels of DNA. So when I look
2 at a DNA profile, it really looks like just peaks on a
3 graph. So if you have a major contributor, their peaks are
4 going to be really tall, and the minor individuals are going
5 to be really small. It's kind of like, if you were looking
6 at a cityscape, you have really tall skyscrapers and little,
7 small houses. In this case, I was able to look at the
8 profile and observe that one person was donating the
9 majority of the DNA.

10 Q. And who was that person?

11 A. When I compared Mr. Coronado's DNA to the mixture as a
12 whole, he was consistent with that major contributor, which
13 accounted for approximately 76 percent of the DNA. But,
14 again, I can't state it was him to the exclusion of all
15 others. Alls I can state is that his DNA was consistent
16 with that major contributor.

17 MR. MCNAIR: I'll pass the witness.

18 THE COURT: Cross-exam?

19 THE DEFENDANT: Can I have a couple seconds?

20 THE COURT: You can. Go ahead.

21 (Discussion off the record.)

22 **CROSS-EXAMINATION**

23 Q. (BY THE DEFENDANT): Good morning.

24 A. Good morning.

25 Q. You were mentioning your -- your degrees and your

1 forensic history. As far as the lab that you work at, the
2 laboratory that you work at, it's a federal bureau lab --

3 A. Yes.

4 Q. -- for the FBI?

5 A. Yes, that's correct.

6 Q. So you work for the Government?

7 A. I do, yes. I work for the FBI laboratory, which is a
8 Government agency, that's correct.

9 Q. And has the lab that you work for ever made mistakes?

10 A. Mistakes can occur. That's why we have those standard
11 operating procedures that our biologists follow to prevent
12 any mistakes. If a mistake does occur, it gets documented
13 in a case file when it's identified.

14 (Discussion off the record.)

15 Q. And as far as, in the laboratory, the work that you
16 do, have you ever personally made mistakes?

17 A. Oh, sure. During my training when I was just learning
18 how to do things, I definitely --

19 Q. Objection. Just "yes" or "no."

20 A. Yes, in my training, yes.

21 Q. And you mentioned the testing that's done. So you can
22 tell the different between -- so you didn't mention urine,
23 feces, hair, or -- basically urine, feces, and hair. Does
24 that have DNA that can be tested?

25 A. It can. Urine typically does not have very much DNA

1 in it. Unless a person has an infection, and then they
2 would have maybe some more white blood cells in their urine,
3 but urine, itself, is just going to be picking up DNA when
4 this travels throughout the body. Like, so when it travels
5 out the urethra, it might pick up some skin cells. But
6 because it's a liquid, it's very diluted so there's not a
7 lot of cells in urine. Feces typically is not a good source
8 of DNA because of all the bacteria in the body will actually
9 digest or break down that DNA. So feces, we do not
10 typically test for DNA at the FBI laboratory. And then
11 lastly, hairs, hairs do have DNA if they have the root
12 material. So if the hair is pulled out of your head, then
13 skin cells will be present on the root of the hair. And we
14 can do the type of testing that I perform on that root.
15 Otherwise, it's a different type of testing, which is called
16 "mitochondrial DNA" for the shaft alone.

17 So, again, yes, DNA is found throughout all of
18 our cells in different body fluids, but at the FBI, we
19 typically are testing for blood, semen, saliva, or skin
20 cells.

21 Q. And so, if you were to cough or sneeze, is that --
22 would that eject skin cells or DNA?

23 A. Yes, it absolutely could. If you cough or sneeze,
24 saliva could come out of your mouth during that act. And
25 saliva does contain DNA, so, yes, that is possible.

1 Q. And so any items or objects that a person happens to
2 wear as far as masks, gloves, hats, clothes, they would
3 contain DNA?

4 A. They could, yes. So again, if you're wearing an item,
5 you could be picking up skin cells or body fluids on those
6 items so, yes, that is possible.

7 Q. And as far as the samples, do you have knowledge as to
8 how many people handled the buccal swabs before they came to
9 your -- to the laboratory?

10 A. I do not know. Once they were received by the
11 laboratory, they would be assigned an item number, but I
12 don't know the history of the buccal sample prior to it
13 arriving at the lab.

14 Q. And once it is at the lab, how many people handled the
15 samples at the lab?

16 A. I would have to refer to my notes.

17 THE WITNESS: Your Honor, may I refer to my
18 notes?

19 THE COURT: Do you want her to refer to her
20 notes?

21 THE DEFENDANT: Yes.

22 THE COURT: Go ahead.

23 THE WITNESS: Sure.

24 A. So are you talking -- may I ask, just for
25 clarification, the actual box that it's in or the sample

1 itself?

2 Q. (BY THE DEFENDANT): Both.

3 A. Both.

4 I see approximately ten individuals handled the
5 box itself. So when the item is mailed to the laboratory,
6 it will get inventoried or checked into the lab. The item
7 is not opened or anything of that nature, it's just checked
8 in. It then moves from location to location.

9 Q. So just ten? That would be fine, just ten people?

10 A. Yes, ten people handled the box, and two individuals,
11 it appears, opened the item.

12 Q. And do you have any knowledge how many people handled
13 the firearm before it came to the lab?

14 A. Before it came to the lab, no, I would not.

15 Q. And do you -- is that the same amount of people that
16 handled the firearm when it did come to the lab?

17 A. It would be approximately the same because the items
18 tend to travel together, yes.

19 Q. And so you mentioned procedures that you have to
20 follow to make sure that the samples stay authentic, that
21 there's no cross-contamination?

22 A. Yes, that's correct.

23 Q. And did all those procedures -- did you follow every
24 procedure to the T?

25 A. Yes, my biologists would have followed the procedures.

1 If any of the procedures were not followed, it would have
2 been documented, and there was no documentation in the file.

3 Q. So you're not the biologist that did the sample test?

4 A. No. I have a team of biologists. I'm the forensic
5 examiner that was assigned to this case and directed a team
6 of biologists to perform that testing.

7 Q. And so you're familiar with the sample well?

8 A. I'm sorry. Can you clarify? I could not hear you.

9 Q. The well plate that the samples go in?

10 A. Yes, I am. A "well plate" is just a plate where the
11 samples are -- or a portion of each sample is added to the
12 plate, and it goes through that quantification and
13 amplification process in a plate format.

14 Q. And is it true, according to -- is it true that those
15 tests in that well plate were both conducted together, right
16 next to each other in the same -- right next to each other
17 on the well plate, at the same time, on the same date?

18 A. Yes, for the amplification process, it was. The
19 quantification process, they were not directly next to each
20 other. During the amplification process, it is routine that
21 they are. Again, the control is also right next to that
22 sample to show that any contamination would not have
23 occurred. And, again, that procedure is extensively
24 validated to show that contamination from well to well would
25 not occur.

1 Q. And so -- but can those samples be separated on the
2 well plate -- on the -- yeah, the well plate?

3 A. They can, but that's not our common practice.
4 Typically, each case will be put onto the well plate as a
5 whole to fill up that well plate.

6 Q. And so can you say, just so that the jury has an idea,
7 how many spaces are in a well plate?

8 A. Ninety-six wells.

9 Q. And the samples were put right next to each other on
10 the well plate out of 96 spaces?

11 A. Yes. And I just want to refer to my notes to just
12 make sure I can visualize it appropriately.

13 Yes, so the evidence item was put on in one well.
14 Then the buccal and then also the control were together.
15 Yes, that's correct.

16 Q. Right next to each other?

17 A. Yes. And, again, that's standard routine practice.

18 Q. And it wouldn't be better to separate and keep them as
19 far away so that there wouldn't be any cross-contamination?
20 "Yes" or "no"?

21 A. It's not really applicable to a "yes" or "no" answer,
22 because, yes, you can do that; however, again, our process
23 has been validated that way and shows that contamination
24 does not occur.

25 Q. So DNA -- all of us here today, we're transferring DNA

1 as we speak, or as you're talking right now, there's DNA
2 that's being transferred from your body to any of the items
3 there (indicating)?

4 A. Sure, it's possible, yes.

5 Q. And you said that there was three contributors on the
6 firearm?

7 A. Yes, that is correct.

8 Q. But there was no other testing done for anybody else
9 except for one contributor for the buccal swab?

10 A. I only received one buccal sample in this case, so I
11 was not able to compare anybody else to the firearm, that is
12 correct.

13 Q. And according to your procedures or -- is it fair to
14 say that you have access to a DNA database?

15 A. We do have a DNA database. It's called CODIS, or the
16 Combined DNA Index System. And some eligible DNA profiles
17 are allowed to be searched in that database to determine
18 some investigative leads to determine who might have left
19 their DNA on that item. We do have access to that database,
20 yes.

21 Q. And so do you know how the database -- I mean, in some
22 places, you go to jail, they make you take a DNA before you
23 get released, or there's just different collections of DNA
24 from different agencies, or is it just all one agency?

25 A. So CODIS is made up of arrestees, convicted offenders,

1 detainees, as well as family members. If they're missing --
2 missing persons, then they can put their own DNA in the
3 database to search against unidentified human remains that
4 are located. So there are DNA samples collected from a
5 variety of individuals that will go into specific categories
6 of the database. And that is national, so it's -- all law
7 enforcement agencies contribute to that database, as long as
8 they follow the quality assurance standards.

9 Q. And so would it be possible, if you only had the
10 firearm, without the buccal swabs, and you tested the
11 firearm, any DNA that came out, those -- that DNA could be
12 retrieved from that database?

13 A. No, not in this case. So firearms typically are not
14 searched in CODIS because it depends on what the potential
15 charge would be. So if, for instance, the charge might be
16 felon in possession, that gun is not eligible for searching
17 in the DNA database. If the gun is used in a particular
18 crime and then abandoned, it might be eligible for
19 searching. In this particular case, I did not have all the
20 information about the CODIS eligibility.

21 In addition, based off of the DNA profile
22 obtained, I would expect that only the major contributor
23 would have been of sufficient quality to be searched in the
24 CODIS database.

25 Q. And any other people that were involved in this case,

1 there was no other DNA tests or DNA tests retrieved from
2 that database pertaining to this case?

3 A. I'm not allowed to go into the database and pull
4 people's DNA out. There are no names in the database, and
5 so this is not actually legal to do that. I have to -- the
6 only way to compare samples in the database is to actually
7 enter the evidence profile in the database. And the profile
8 must be of sufficient quality and quantity. So, again, only
9 the major contributor would have probably met that criteria.
10 In order to do comparisons, I would have had to have
11 received a known sample from additional individuals. And in
12 this case, I did not receive additional knowns.

13 Q. And as far as the cross-contamination, is that an
14 assumption? You assume that the firearm didn't receive any
15 cross-contamination, or is that a fact?

16 A. I can't say what happened to the firearm before it
17 came to the FBI laboratory. What I can state is, once it
18 was at the FBI laboratory, it followed our standard
19 operating procedures, which limits or prevents any
20 contamination from occurring. And, again, using the
21 controls in this case, no contamination was detected.

22 Q. And so if the firearm was -- if the firearm is placed
23 on a piece of clothing, could DNA be transferred to that
24 firearm that you reviewed or tested?

25 A. It is possible. So I can't state how or when the DNA

1 was left behind on an item of evidence. I can only state
2 whether DNA was detected on that item. Transfer can occur
3 between items, but the transfer is going to depend on a
4 variety of things.

5 So, for instance, if the DNA on the clothing was
6 wet, so, like, for instance liquid blood, that's going to
7 transfer more readily than a dried blood stain or a dried
8 anything. It doesn't have to be a blood stain, but any
9 dried sample is going to transfer less readily. The type of
10 contact, like, friction contact is going to be more likely
11 to transfer DNA versus just laying an item on an object.
12 The length of time can have an effect. So, yes, it is
13 possible, but there's a variety of factors that would go
14 into play.

15 Q. So, for example, if somebody were to put a gun into a
16 glove that was worn by somebody, would that transfer DNA?

17 A. It is possible. Again, I can't state how or when the
18 DNA was left behind.

19 Q. Now, there was -- did you do the testing on any
20 steering wheels or anything like that?

21 A. Yes, I did. So I received additional submissions of
22 evidence later on. And I did obtain swabs of steering
23 wheels, that is correct.

24 Q. And so most steering wheels are handled by hand,
25 right? I mean, I don't really -- that's obvious? Is that

1 pretty obvious?

2 A. Yeah, that would be my assumption, yes.

3 Q. And so firearms would probably, more than likely, be
4 handled the same way, with a hand?

5 A. Yes, that is possible; however, oftentimes, firearms
6 are often put in waistbands. Using a firearm or holing a
7 firearm, that would be hand contact, that's correct.

8 Q. And so you were saying about -- so there's a different
9 between rich DNA or a rich sample and samples that are not
10 rich in DNA? There's a big difference that can be tested
11 for? The richness or the high -- how rich the sample -- how
12 much DNA is carried in that sample?

13 A. One of the steps in the process -- we do quantify the
14 amount of DNA that is present. So there is a step in our
15 process that kind of gives us an idea of how much DNA was
16 able to be obtained from our swabbing of the firearm, yes,
17 that's correct. I believe I'm answering the question.

18 Q. And the DNA samples on the steering wheels that you
19 conducted, were -- some were negative and some were low?

20 THE WITNESS: Your Honor, again, may I refer to
21 my notes?

22 THE COURT: Yeah.

23 A. So we received two separate submissions that involved
24 a swab from a steering wheel. One was two swabs from a
25 white Ford F-150 steering wheel, and also a swab from a

1 steering wheel from a 2007 GMC Denali. I was able to obtain
2 comparable DNA from both of those swabs of the steering
3 wheel. One was more -- you know, had more DNA than the
4 other; however, one was of limited quantity.

5 Q. So is that a big difference compared to the -- what
6 was found on the firearm? As far as the quantity.

7 A. So on one of the swabs from the steering wheel, very
8 little DNA was found, so there was less DNA found as
9 compared to the firearm. On the other swabs from the
10 steering wheel from the Ford F-150, there was actually
11 slightly more DNA on that swab of the steering wheel than
12 the firearm. So the firearm fell in the middle between the
13 two when we estimated the quantity of the DNA obtained.

14 Q. Did any of the -- there was DNA, but did any of the
15 DNA come back to anybody that you tested for? Any matches?

16 A. Yes. So -- from the steering wheel swabs?

17 Q. Yes.

18 A. Yes, so when I -- again, I compared the steering
19 wheel -- there was two sets of steering wheels, so they were
20 each tested independently. For the two swabs from the white
21 Ford F-150 steering wheel, male DNA was obtained. And,
22 again, it was interpreted originating from three
23 individuals. When I compared the DNA to the known sample I
24 had for Mr. Coronado, I could not exclude him as a possible
25 contributor to that DNA. For this sample, the likelihood

1 ratio was 1.9 billion, which was very strong support for
2 inclusion.

3 And then, for the second swab from the steering
4 wheel, which was the 2007 GMC Denali, this was the sample
5 that had very little DNA obtained from it. So for that swab
6 from the steering wheel, no conclusion could be made
7 regarding the sex-typing results; meaning, I couldn't tell
8 whether it was male or female. And it was interpreted,
9 assuming the DNA originated from two individuals. When
10 compared to Mr. Coronado, again, I could not exclude him as
11 a possible contributor; however, the likelihood ratio in
12 this instance was 63, which is limited support for
13 inclusion.

14 MR. MCNAIR: And, Your Honor, could I just object
15 in the sense of relevance on the Denali. It's something
16 we've talked about before.

17 THE COURT: Okay. Well, she just testified to
18 it, so...

19 MR. MCNAIR: I know, but just any further
20 questions on that.

21 THE COURT: All right. Sustained as to the
22 Denali.

23 Go ahead, Mr. Coronado.

24 Q. (BY THE DEFENDANT): So there was a rich source
25 of DNA on the firearm?

1 A. Yes, there was enough DNA to perform a comparison and
2 calculate a statistic, so there was significant amounts of
3 DNA present.

4 Q. And is that common with handling with your hands?

5 A. Yes, it is possible, because you can leave skin cells
6 behind. You might also leave other body fluids behind. So,
7 for instance, if you sneeze or cough and cover your mouth,
8 you could have saliva also on your hand. So when you touch
9 something, it's not necessarily just DNA from skin, it could
10 be DNA from other body fluids as well.

11 THE DEFENDANT: That will be all, Your Honor.

12 THE COURT: Redirect?

13 MR. MCNAIR: Just briefly, Your Honor.

14 **REDIRECT EXAMINATION**

15 Q. (BY MR. MCNAIR): So you were interrupted
16 whenever Mr. Coronado was asking you about how many
17 people had handled the buccal swabs. Did you --
18 would want to finish your answer on that?

19 A. Yes, sir. For the buccal swabs, it is routine that,
20 when evidence is mailed to the laboratory, again, it will
21 get inventoried by an individual. And all they're doing is
22 receiving -- or excuse me, not inventorying, they're
23 receiving the box. So they receive the box from the FedEx
24 truck driver. They're just talking the box. They're not
25 opening it. They then will put it in the evidence vault.

1 It will then get inventoried by an individual, which will
2 typically open the packaging to verify they received the
3 correct item. That individual will then package it up. And
4 someone else might move the box to the DNA Unit. So for
5 instance, it will get transferred to the DNA Unit, but,
6 again, it would not be opened. It will stay in a properly
7 sealed condition.

8 Once it is received by the DNA Unit, somebody
9 might inventory that or take the sample, but they're not
10 opening the buccal again, they're just receiving the package
11 to verify that it was received. The first person that
12 really opens it and processes it in the DNA Casework Unit
13 would be the individual doing the collection. That's the
14 person that's cutting or swabbing the item of evidence.
15 Once they've opened the box, they -- or excuse me, the item
16 and they finish their collection, they'd reseal it and move
17 it to an evidence vault.

18 So, again, the box will travel from person to
19 person, but, really, it's not being opened or handled by
20 anyone other than the person doing the inventory and the
21 person doing the collection. And also, in this case, the
22 buccal DNA profile showed a single individual, so that is
23 consistent with just one male person. There was no
24 instances of a mixture on the buccal, which would be
25 indicative of a contamination.

1 Q. And you were also asked whether or not Mr. Coronado's
2 DNA was on a steering wheel swab from the white F-150?

3 A. I did compare Mr. Coronado to the DNA obtained from
4 that Ford F-150. And, again, he matched or could not be
5 excluded a possible contributor. So, again, whenever you
6 have a match, you can calculate a statistic. And this was
7 1.9 billion for the likelihood ratio.

8 Q. And are you aware -- I don't know if your notes say.
9 Were those swabs of the steering wheel, were those swabs
10 obtained by the Las Cruces Police Department? You didn't
11 have the physical steering wheel at the laboratory, correct?

12 A. That is correct. We received swabs from the field.
13 We did not actually receive the steering wheel from the
14 field. That is correct.

15 Q. I guess do your notes -- maybe they don't say, but do
16 you know who took those swabs?

17 A. I would not know who took those swabs, no.

18 MR. MCNAIR: Okay. No further questions, Your
19 Honor.

20 THE COURT: Thank you, ma'am. You're excused.
21 The Government may call its next witness.

22 And the video, I think, is working now.

23 MR. MCNAIR: I think we'll probably continue with
24 the DNA folks.

25 THE COURT: That's fine.

1 MR. MCNAIR: And can Ms. Smith be excused?

2 THE COURT: She may. Thank you.

3 THE WITNESS: Thank you, Your Honor.

4 MR. MCNAIR: And the Government calls Candi
5 Alvarado.

6 THE COURT: All right. Ms. Alvarado, come
7 forward to be sworn.

8 **CANDI ALVARADO,**

9 After having been first duly sworn, did make the
10 following answers:

11 **DIRECT EXAMINATION**

12 Q. (BY MR. MCNAIR): Good morning.

13 A. Good morning.

14 Q. So I know that you're a little soft-spoken kind of
15 like me, so just make sure you pull that microphone close to
16 you or speak into the microphone.

17 A. Okay.

18 Q. Could you please state your name?

19 A. My name is Candi Alvarado.

20 Q. And where do you work?

21 A. I work at the FBI laboratory in Quantico, Virginia.

22 Q. And were you working at the FBI lab in May of 2022?

23 A. Yes, I was.

24 Q. And what was your job at the lab at that time?

25 A. I was a biologist in the DNA Casework Unit.

1 Q. And did you receive specialized training to do that
2 job?

3 A. Yes, I did.

4 Q. And could you explain what some of that training was?

5 A. My training period for collection lasted approximately
6 two months. During that time, I was paired with a trainer.
7 I observed the trainer perform evidence collection
8 procedures on mock evidence, followed by a period where I
9 completed collection procedures on mock evidence. After
10 that time, I was given a competency test where I performed
11 collection procedures on mock evidence independently. And
12 then I was qualified after completing the competency test.

13 Q. And what is your educational background?

14 A. I have a bachelor of science in forensic science from
15 Virginia Commonwealth University.

16 Q. And so in your time with the DNA Casework Unit, have
17 you swabbed firearms for DNA before?

18 A. Yes, I have.

19 Q. And briefly if you could just describe for the jury
20 what your typical process would be in swabbing a firearm.

21 A. I would take a sterile swab. I would add sterile
22 water to it and then swab the textured areas of the firearm,
23 which is the rough areas of the firearm. I then cut the
24 swab with a sterile scalpel, and I place the swab into a
25 uniquely bar-coded tube. I close the tube and then label

1 the tube with the lab number and the item number.

2 Q. And, I guess, could you, while we're on the subject,
3 how -- you've processed buccal swabs before as well?

4 A. Yes, I have.

5 Q. What's the typical process for that?

6 A. I would follow our SOPs to cut a portion of the buccal
7 swab and place that swab into a uniquely bar-coded tube,
8 close the tube, and then label it with the lab number and
9 the item number.

10 Q. And so, in May of 2022, were you asked to process a
11 firearm seized from 1425 Durazno in Las Cruces, New Mexico?

12 A. Yes.

13 Q. And was the -- did you actually receive the firearm,
14 itself, at the laboratory?

15 A. Yes, I had the firearm.

16 Q. And do you recall what the make of the firearm was?

17 A. It was a Ruger.

18 Q. And did the firearm have any type of identifying or
19 serial number on it?

20 A. Yes. It did.

21 Q. And do you recall what that was?

22 THE WITNESS: May I refer to my notes?

23 THE COURT: Yes, go ahead.

24 A. The number was 371328743.

25 Q. (BY MR. MCNAIR): Okay. I'm going to show you

1 Government's Exhibit 8. And I see that you're
2 putting gloves on there.

3 A. Yes.

4 Q. Is that just out of an abundance of caution, out of
5 training?

6 A. Yes. I do not touch items of evidence without gloves
7 on.

8 Q. And do you recognize that item?

9 A. Yes.

10 Q. And is that the gun that you received from 1425
11 Durazno?

12 A. Yes, it is.

13 Q. And is the serial number on that gun consistent with
14 the serial number you just read to us from your notes?

15 A. Yes, it is.

16 Q. And if I could have you just look on the front of the
17 box. Do you see -- are your initials anywhere on the box?

18 A. Yes, there are.

19 Q. Could you point to where your initials are?

20 A. Here by the lab number (indicating), "CLA."

21 Q. So when would you have put your initials on that box?

22 A. I'm sorry. Could you repeat that?

23 Q. At what point would you have put your initials on that
24 box? Is that when you...

25 A. Before I open the item.

1 Q. Okay. I'm going to show you Government's
2 Exhibit 7(d).

3 And so if you could -- if the screen is working,
4 could you just swab -- circle -- not the swab, but could you
5 circle on this gun where you would have swabbed for DNA.

6 A. (Complying.)

7 Q. And so you're circling the handle there?

8 A. Yes.

9 Q. Is that the textured areas that you were talking
10 about?

11 A. Yes, that is the textured areas on this side of the
12 firearm (indicating).

13 Q. Okay. So you would have, I guess, swabbed all around
14 that textured area?

15 A. Yes.

16 MR. MCNAIR: Okay. Could we look at Government's
17 Exhibit 7(e), please. And could we remove the -- thank you.

18 Q. (BY MR. MCNAIR): And so I presume that you did
19 the same thing with the handle on this side?

20 A. Yes, I did.

21 Q. And is there any other thing that you see on this side
22 that you would have swabbed?

23 A. Yes.

24 Q. And could you circle that as well?

25 A. (Complying.)

1 Q. And so do you actually know what that part of the
2 firearm would be?

3 A. No, I do not know the parts of the gun.

4 Q. But you swabbed that one just because it has a
5 textured groove to it?

6 A. Correct.

7 MR. MCNAIR: And I guess, while we have this up,
8 could we delete that circle, please.

9 COURT CLERK: I'm sorry, I didn't hear you.

10 MR. MCNAIR: Could you delete that circle,
11 please? Thank you.

12 Q. (BY MR. MCNAIR): And could you just put a line
13 under where the serial number was when you looked at
14 the one in the box.

15 A. (Complying.)

16 MR. MCNAIR: Thank you. We can go ahead and take
17 down that exhibit.

18 Q. (BY MR. MCNAIR): And so we just kind of went
19 over it, but the process that you outlined for how
20 you go about swabbing a firearm, that's what you did
21 in this case?

22 A. Yes, it is.

23 Q. And what do you do with the swabs from the firearm
24 when you're done swabbing the gun?

25 A. With the swab, as I said, I label the tube with the

1 lab number and the item number. And after the collection is
2 completed, I'll put the item back into its packaging layers
3 and I will seal that with tape. I'll seal each packaging
4 layer with tape and I'll put my initials on the tape.

5 Q. And then you also said that you received a buccal
6 swab. So did you process the buccal swab also for
7 collections?

8 A. I did, yes.

9 Q. And did you clean your work surface before you then
10 processed the buccal swab?

11 A. Yes, I followed our SOPs to clean my workstation and
12 all of my tools with bleach prior to pulling out another
13 item.

14 Q. And what were you wearing, I guess, through this whole
15 process?

16 A. I was wearing my PPE, which stands for "personal
17 protective equipment." So that consists of a lab coat,
18 gloves, facemask, and eye protection.

19 Q. And so once you swab the buccal swab -- the swabs that
20 you took from the firearm that you processed, and the buccal
21 swab, those are all stored separately, correct?

22 A. Yes, they're each in their own tube.

23 Q. And then I guess, once you put them -- where do you
24 put them at that point?

25 A. After the collections are complete, I transfer the

1 uniquely bar-coded tubes into a bar-coded refrigerator to
2 await further processing.

3 Q. And once you've done that, does that conclude your
4 part of the testing process?

5 A. Yes.

6 MR. MCNAIR: I'll pass the witness, Your Honor.

7 THE COURT: Cross-exam?

8 **CROSS-EXAMINATION**

9 Q. (BY THE DEFENDANT): Good morning.

10 A. Good morning.

11 Q. So you're the biologist who did the initial testing of
12 the samples?

13 A. Correct.

14 Q. And so just to -- the fingerprinting, was that done by
15 you or was that done by another...

16 A. I am just the DNA biologist.

17 Q. And do you happen to know when the fingerprinting took
18 place? Before or after?

19 MR. MCNAIR: I would object on that, Your Honor.

20 THE COURT: What was the objection?

21 MR. MCNAIR: I'm objecting because that's outside
22 the scope of direct, and she lacks personal knowledge.

23 THE COURT: Sustained.

24 Q. (BY THE DEFENDANT): So just the DNA samples is
25 all that you know about, as far as the testing?

1 A. Correct.

2 Q. But you don't happen to know if there was any
3 fingerprints found on that?

4 THE COURT: That was --

5 MR. MCNAIR: Objection.

6 THE COURT: -- sustained. That was sustained.
7 Don't ask about it.

8 Q. (BY THE DEFENDANT): During procedure, would
9 the DNA analysis take place first?

10 A. I do not know the order that it would have gone
11 through the lab. I only know my actions of how I completed
12 collections in this case.

13 Q. And so as far as the procedures that you took, you
14 followed all the procedures that are necessary to the T?

15 A. Yes. I followed our SOPs.

16 Q. Have you ever made mistakes working as a biologist?

17 A. I have always followed our SOPs when completing
18 collections.

19 Q. Just "yes" or "no," have you ever made mistakes?

20 MR. MCNAIR: Objection, asked and answered.

21 THE COURT: That was asked and answered.

22 Q. (BY THE DEFENDANT): Has your lab ever made
23 mistakes?

24 MR. MCNAIR: Objection, lack of personal
25 knowledge.

1 THE COURT: She's not the lab person. She's the
2 swab person, so sustained.

3 Q. (BY THE DEFENDANT): As far as the well plate,
4 were you the one that put the samples into the well
5 plate?

6 MR. MCNAIR: Objection, outside the scope and
7 lack of personal knowledge.

8 THE COURT: Sustained.

9 THE DEFENDANT: I thought she was the biologist
10 that did that?

11 THE COURT: I mean, she -- you can ask questions
12 about what she testified to on direct, which is getting the
13 gun, swabbing it, and then turning the swabs over. So
14 that's what she did.

15 (Discussion off the record.)

16 Q. (BY THE DEFENDANT): So when you took the swabs
17 on the firearm, who did you turn those over to?

18 A. I transferred the swabs into a bar-coded refrigerator
19 to await further examination.

20 Q. And how many people were in possession of those
21 samples?

22 MR. MCNAIR: Objection, lack of personal
23 knowledge.

24 THE COURT: Do you have personal knowledge of
25 that?

1 THE WITNESS: I only know my part.

2 THE COURT: Sustained.

3 Q. (BY THE DEFENDANT): So you can't say for sure
4 whether anybody else touched those samples?

5 THE COURT: She just testified to that. That's
6 asked and answered.

7 Q. (BY THE DEFENDANT): And you stated that you
8 wanted to put gloves on because you don't want to
9 touch any evidence. Is that because the DNA is
10 easily transferred?

11 A. I personally always wear gloves when I handle
12 evidence, even if it has already been processed.

13 Q. And to your knowledge, the gloves that you're wearing
14 now, is there -- is your DNA going to be transferred into
15 those gloves?

16 MR. MCNAIR: Objection, Your Honor. Outside the
17 scope and lack of personal knowledge.

18 THE COURT: I'll overrule that.

19 If you know the answer to that, you can answer.

20 A. I do not know the answer.

21 Q. (BY THE DEFENDANT): And so you don't have no
22 personal knowledge as to any of the DNA that was
23 transferred onto that item until it reached the lab?

24 A. I only know the actions I took with the evidence once
25 it was in my custody.

1 Q. And if...

2 THE DEFENDANT: Well, I guess that's all, Your
3 Honor.

4 THE COURT: Redirect?

5 **REDIRECT EXAMINATION**

6 Q. (BY MR. MCNAIR): Just one question: So you
7 were kind of asked about some of processes and stuff
8 for the lab. Would those have been more appropriate
9 questions for Ms. Smith?

10 A. Yes.

11 MR. MCNAIR: No further questions.

12 THE COURT: Thank you for your testimony. You're
13 excused.

14 (End partial transcript.)

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1 UNITED STATES OF AMERICA

2 DISTRICT OF NEW MEXICO

3
4 CERTIFICATE OF OFFICIAL REPORTER

5 I, Vanessa I. Alyce Chavez, CRR, RPR, NMCCR, and
6 Federal Official Court Reporter in and for the United States
7 District Court for the District of New Mexico, do hereby
8 certify that pursuant to Section 753, Title 28, United
9 States Code, that I did report in stenographic shorthand to
10 the best of my skill and ability the foregoing pages 1-51 of
11 the partial proceedings set forth herein, that the foregoing
12 is a true and correct partial transcript of Volume II of II
13 of the stenographically recorded proceedings held in the
14 above-entitled matter and that the transcript page format is
15 in conformance with the regulations of the Judicial
16 Conference of the United States.

17
18 Dated this 8th day of May 2024.

19
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